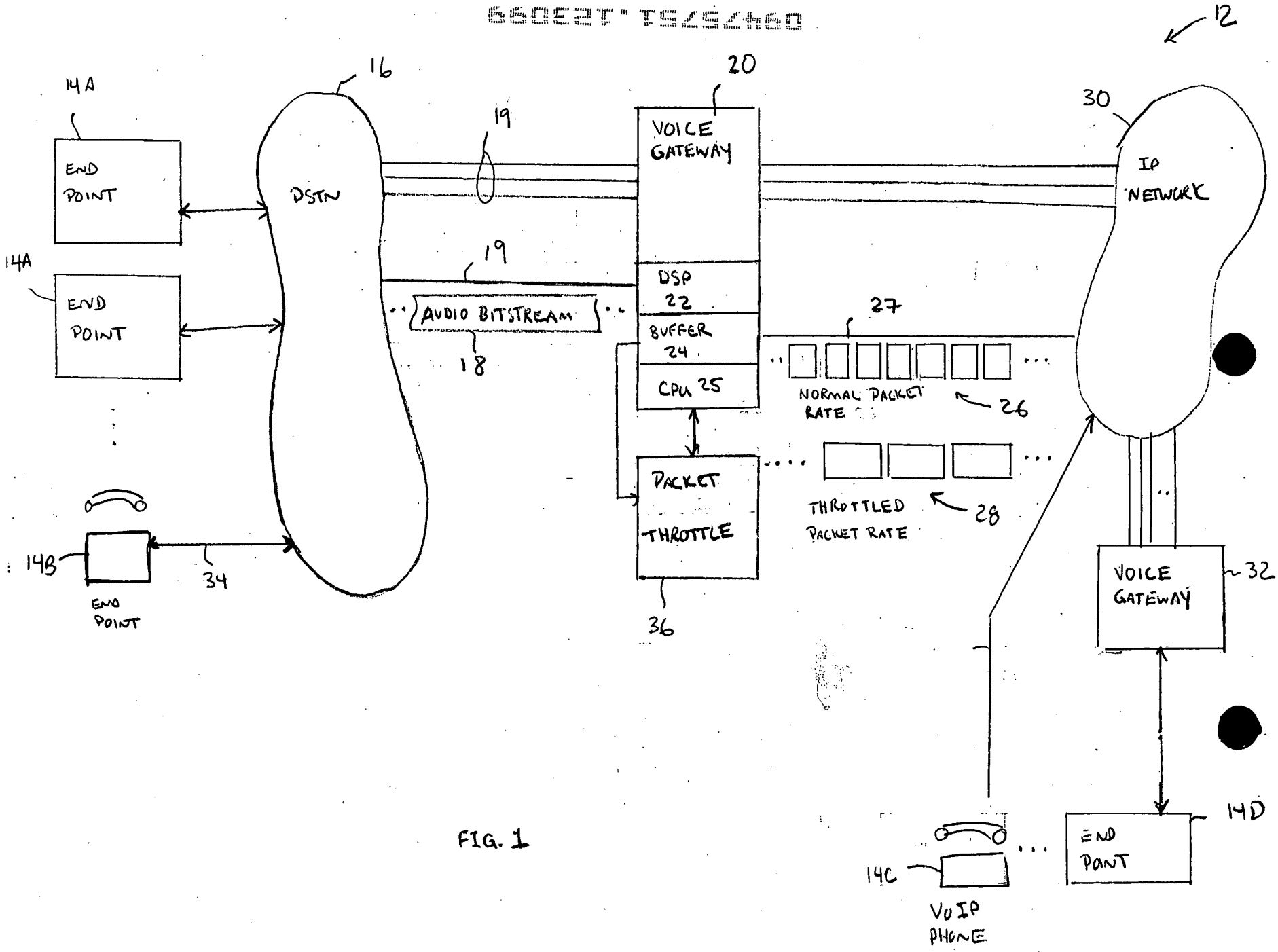
12
14A
16
20
30
END POINT
DSTN
19
VOICE GATEWAY
IP NETWORK
14A
END POINT
19
DSP 22
AUDIO BITSTREAM
18
BUFFER 24
27
CPU 25
NORMAL PACKET RATE
26
PACKET THROTTLE
THROTTLED PACKET RATE
28
14B
34
END POINT
36
VOICE GATEWAY
32
14D
END POINT
14C
VOIP PHONE

FIG. 1

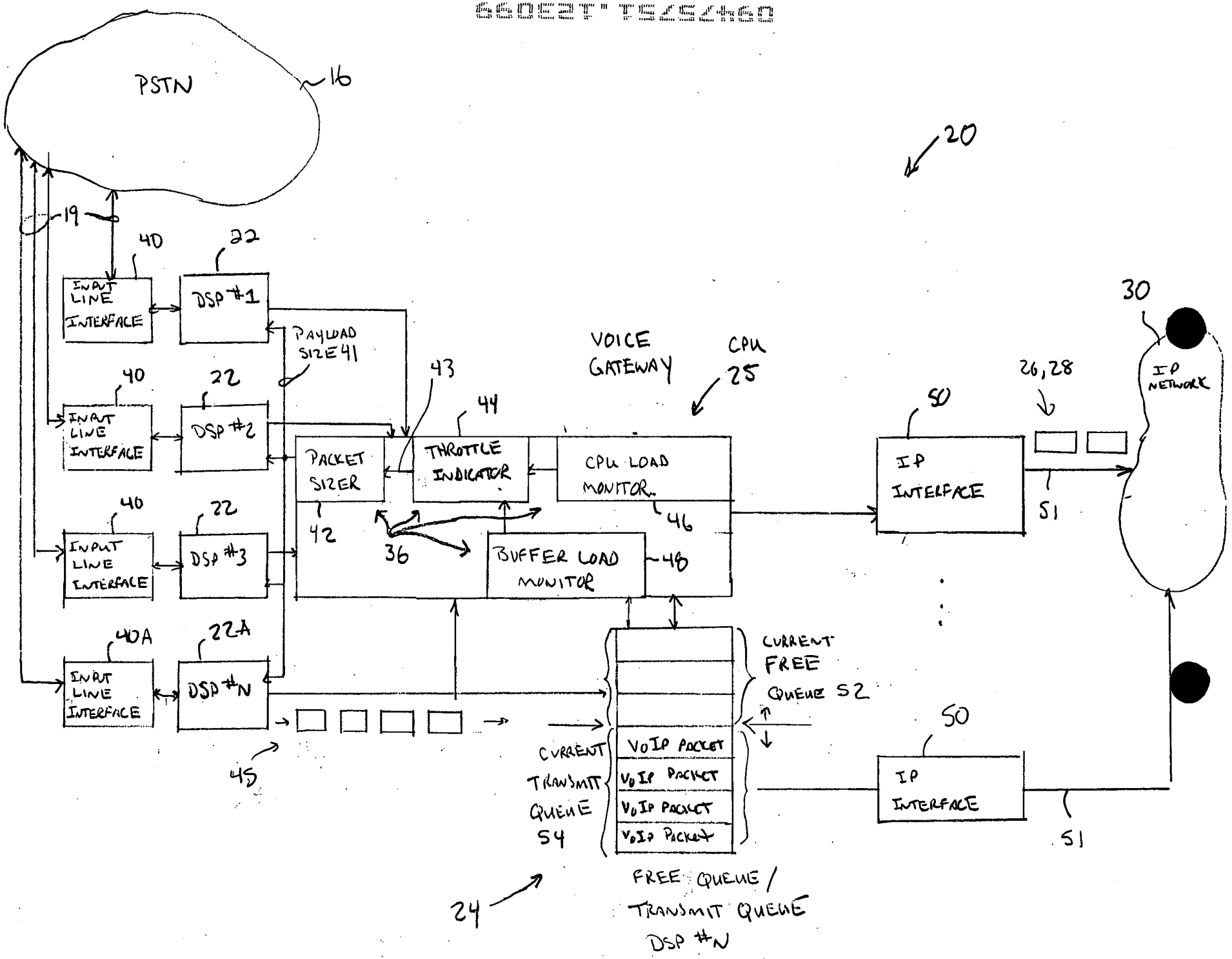
PSTN
16
20
19
40
22
INPUT LINE INTERFACE
DSP #1
PAYLOAD SIZE 41
VOICE GATEWAY
CPU 25
43
44
PACKET SIZER
THROTTLE INDICATOR
CPU LOAD MONITOR
46
42
36
BUFFER LOAD MONITOR
48
DSP #2
DSP #3
40A
22A
DSP #N
45
50
IP INTERFACE
26,28
30
IP NETWORK
51
CURRENT FREE QUEUE 52
CURRENT TRANSMIT QUEUE 54
VoIP PACKET
24
FREE QUEUE / TRANSMIT QUEUE DSP #N

FIG. 2

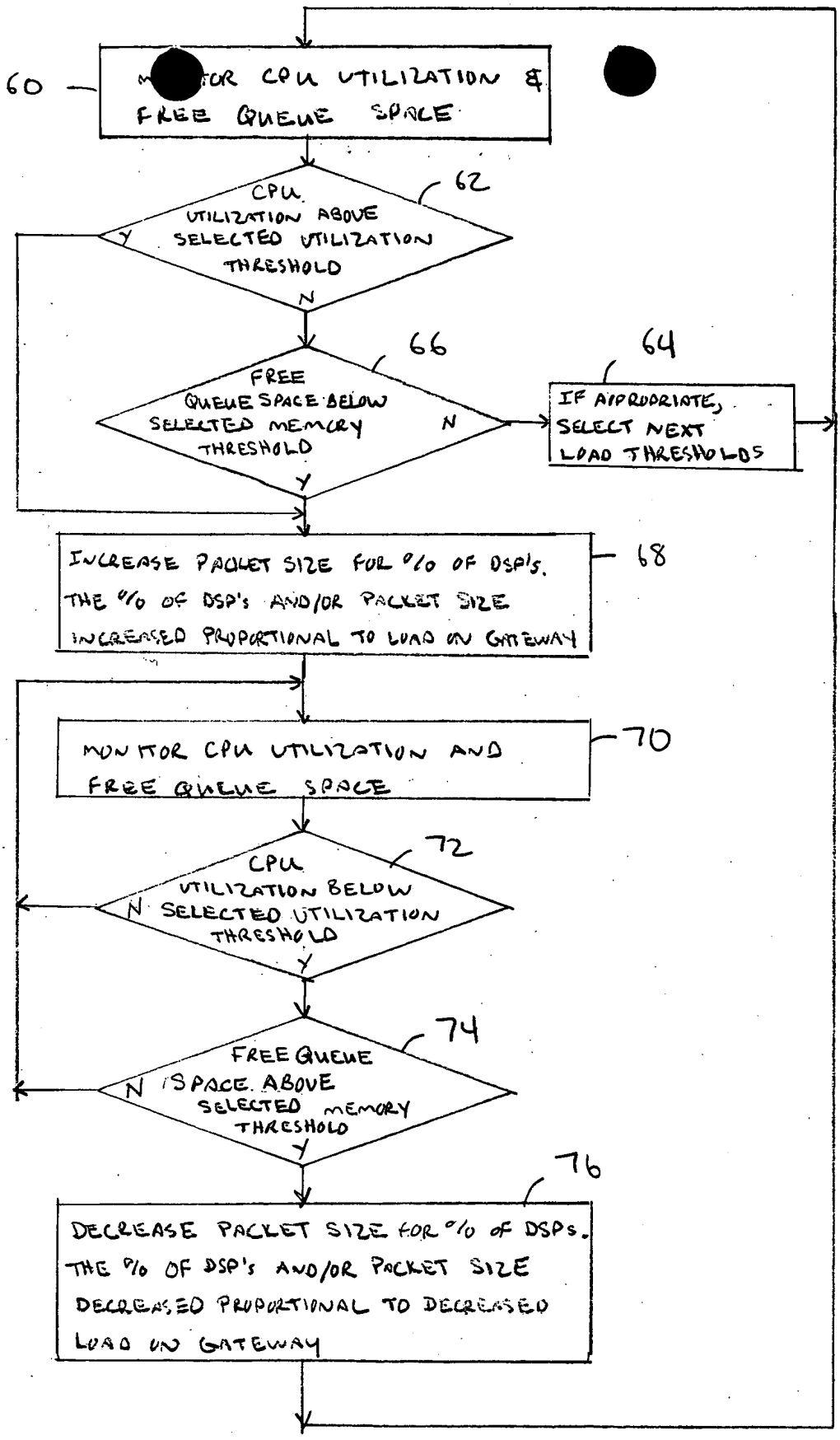

FIG. 3

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Available VOICE GATEWAY CAPACITY = HIGH or medium

80 ↘ VOIP PACKET

IP HEADER	UDP HEADER	RTP HEADER	AUDIO PAYLOAD
20 BYTES	8 BYTES	12 BYTES	20 BYTES (10 ms)

82 ↘ Available VOICE GATEWAY CAPACITY = LOW

IP HEADER	UDP HEADER	RTP HEADER	AUDIO PAYLOAD
20 Bytes	8 Bytes	12 Bytes	40 Bytes (40 ms)

Available VOICE GATEWAY CAPACITY = VERY LOW or ZERO

84 ↘

IP HEADER	UDP HEADER	RTP HEADER	AUDIO PAYLOAD
20 Bytes	8 Bytes	12 Bytes	100 + Bytes (100 + ms)

FIG. 4